

CHICAGO
Electric Power Tools
INDUSTRIAL

3/4" ELECTRIC IMPACT WRENCH

Model 92651

OPERATING INSTRUCTIONS



3491 Mission Oaks Blvd., Camarillo, CA 93011
Visit our Web site at: <http://www.harborfreight.com>

**TO PREVENT SERIOUS INJURY,
READ AND UNDERSTAND ALL WARNINGS
AND INSTRUCTIONS BEFORE USE.**

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For technical questions or replacement parts, please call 1-800-444-3353.

PRODUCT SPECIFICATIONS

Item	Description
Electrical Requirements	120V / 60 Hz / 8.5 AMPs. Power Plug Type: 2 Prong, Polarized. Power Switch Type: Rocker w/Forward & Reverse.
Drive Size	3/4".
Impacts Per Minute	1700 BPM.
Ft./Lbs. Torque	400 Ft./Lbs.
Construction	Poly-Plastic, High Carbon Steel. Cast Aluminum, Rubber.
Unit Weight	12.76 Pounds.

UNPACKING

When unpacking, check to make sure all the parts shown on the **Parts List on page 12** are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

SAVE THIS MANUAL

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

GENERAL SAFETY RULES



WARNING!

READ AND UNDERSTAND ALL INSTRUCTIONS
Failure to follow all instructions listed in the following
pages may result in electric shock, fire, and/or serious injury.

SAVE THESE INSTRUCTIONS

WORK AREA

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite flammables.
3. **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control. Protect others in the work area from debris such as chips and sparks. Provide barriers or shields as needed.

PERSONAL SAFETY

1. **Stay alert. Watch what you are doing, and use common sense when operating a power tool. Do not use a power tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.
2. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
3. **Avoid accidental starting. Be sure the Power Switch is off before plugging in.** Carrying power tools with your finger on the Power Switch, or plugging in power tools with the Power Switch on, invites accidents.
4. **Remove adjusting keys or wrenches before turning the power tool on.** A wrench or a key that is left attached to a rotating part of the power tool may result in personal injury.
5. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the power tool in unexpected situations.
6. **Use safety equipment. Always wear ANSI approved safety goggles underneath a full face shield, a dust mask or respirator, and hearing protection.**

TOOL USE AND CARE

1. **Use clamps or other practical ways to secure and support the workpiece to a stable platform.** Holding the work by hand is unstable and may lead to loss of control. Only work on a workpiece that is properly secured.

2. **Do not force the tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.
3. **Do not use the power tool if the Power Switch does not turn it on or off.** Any tool that cannot be controlled with the Power Switch is dangerous and must be replaced.
4. **Disconnect the Power Cord Plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
5. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
6. **Maintain tools with care.** Do not use a damaged tool. Tag damaged tools “Do not use” until repaired.
7. **Check for misalignment or binding of moving parts, breakage of parts, cracking or breakage of the Cut-Off Wheel, and any other condition that may affect the tool’s operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
8. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may become hazardous when used on another tool.


SERVICE

1. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
2. **When servicing a tool, use only identical replacement parts. Follow instructions in the “*Inspection, Maintenance, And Cleaning*” section of this manual.** Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

ELECTRICAL SAFETY

1. **Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.** If the tools should electrically malfunction or

break down, grounding provides a low resistance path to carry electricity away from the user.

2. **Double insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.** Double insulation  eliminates the need for the three wire grounded power cord and grounded power supply system.
3. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators.** There is an increased risk of electric shock if your body is grounded.
4. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
5. **Do not abuse the Power Cord. Never use the Power Cord to carry the tools or pull the Plug from an outlet. Keep the Power Cord away from heat, oil, sharp edges, or moving parts. Replace damaged Power Cords immediately.** Damaged Power Cords increase the risk of electric shock.
6. **When operating a power tool outside, use an outdoor extension cord marked “W-A” or “W”.** These extension cords are rated for outdoor use, and reduce the risk of electric shock.

GROUNDING



WARNING!

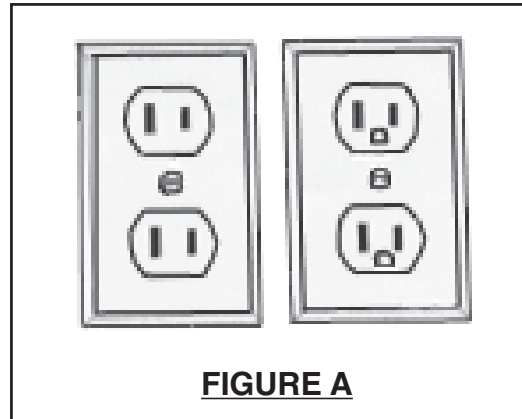
Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

DOUBLE INSULATED TOOLS: TOOLS WITH TWO PRONG PLUGS

1. Tools marked “Double Insulated” do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with

the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code. **(See Figure A.)**

2. Double insulated tools may be used in either of the 120 volt outlets shown in the following illustration. **(See Figure A.)**



EXTENSION CORDS

1. **Double Insulated** tools can use either a two or three wire extension cord.
2. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. **(See Figure B, next page.)**
3. The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. **(See Figure B.)**
4. When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required. **(See Figure B.)**
5. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size. **(See Figure B.)**
6. If you are using an extension cord outdoors, make sure it is marked with the suffix "W-A" ("W" in Canada) to indicate it is acceptable for outdoor use.

7. Make sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
8. Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS* (120 VOLT)					
NAMEPLATE AMPERES (At Full Load)	EXTENSION CORD LENGTH				
	25 FEET	50 FEET	75 FEET	100 FEET	150 FEET
0-2.0	18	18	18	18	16
2.1-3.4	18	18	18	16	14
3.5-5.0	18	18	16	14	12
5.1-7.0	18	16	14	12	12
7.1-12.0	16	14	12	10	-
12.1-16.0	14	12	10	-	-
16.1-20.0	12	10	-	-	-
*Based on limiting the line voltage drop to five volts at 150% of the rated amperes.					

FIGURE B

SYMBOLOLOGY






	Double Insulated
	Canadian Standards Association
	Underwriters Laboratories, Inc.
V ~	Volts Alternating Current
A	Amperes
n_o xxxx/min.	No Load Revolutions Per Minute (RPM)


FIGURE C

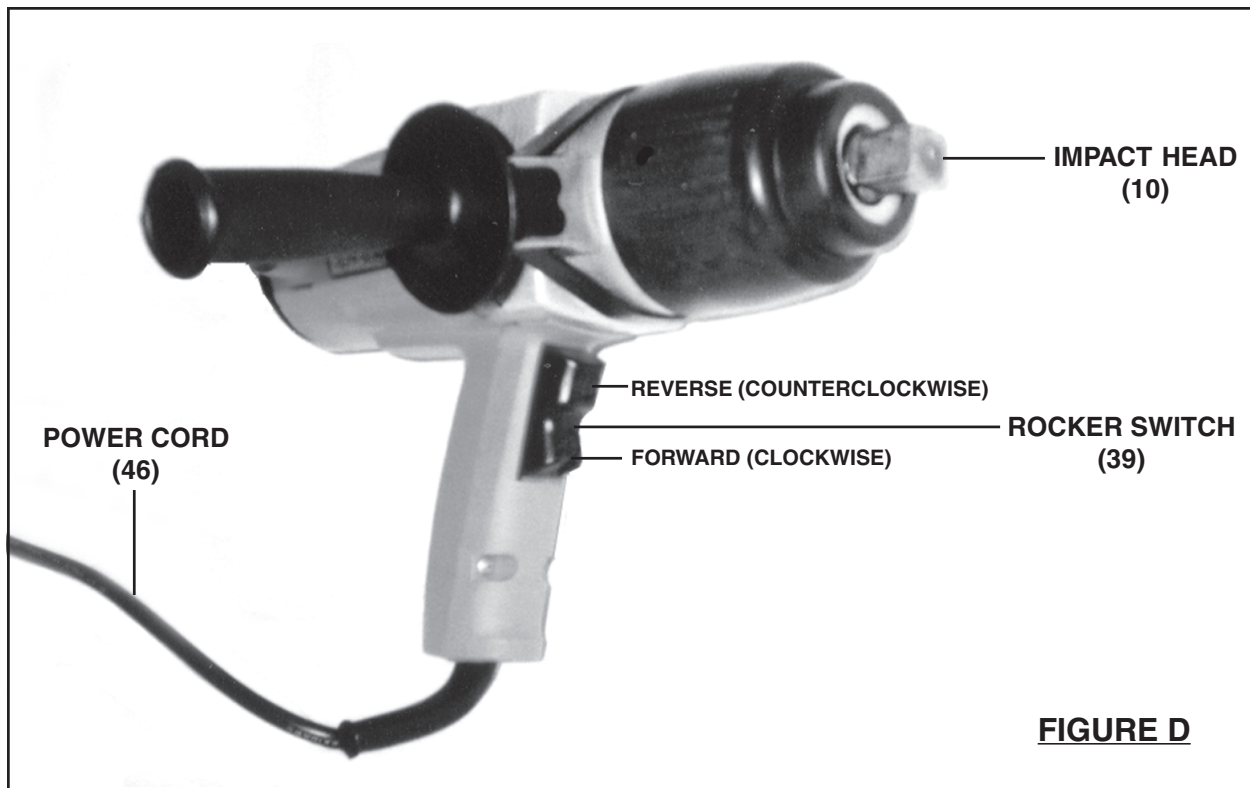
SPECIFIC SAFETY RULES

1. **Maintain labels and nameplates on the Impact Wrench.** These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
2. **When using the Impact Wrench, always maintain a firm grip on the tool with both hands (one hand on side handle and one on main handle).**
3. **Do not use the Impact Wrench if it has been dropped, damaged, left outdoors, or immersed in liquid.**
4. **To avoid electrical shock, do not pull or carry the Impact Wrench by its Power Cord or pull the Power Cord around sharp corners or edges.** Do not unplug the Impact Wrench by pulling on the Power Cord. Keep the Power Cord away from heated surfaces.
5. **To avoid electrical shock, do not handle the Impact Wrench with wet hands.**
6. **Keep the Handle of the Impact Wrench dry, clean, free from oil and grease.**
7. **Always turn off the Impact Wrench and unplug the tool from its electrical outlet before changing accessories or performing any inspection, maintenance, or cleaning procedures.**
8. **Industrial applications must follow OSHA requirements.**
9. **Use the right tool or attachment for the right job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool or attachment. There are certain applications for which this product was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this product, and do not use this product for a purpose for which it was not intended.
10.  **WARNING!** People with pacemakers should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.
11.  **WARNING!** The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

PRODUCT FEATURES

NOTE: For additional information regarding the parts listed in the following pages, refer to the **Assembly Diagram on page 13.**


1.  **WARNING!** Always make sure the Rocker Switch (39) of the Impact Wrench is in its “OFF” position and the tool is unplugged from its electrical outlet prior to making any adjustments to the tool. **(See Figure D.)** **Note:** When your finger is off the Rocker Switch (39), the tool is in the “OFF” position.
2. **Rocker Switch (39):** The Rocker Switch is operated *manually* simply by squeezing the Switch to turn on the Impact Wrench and releasing pressure on the Switch to turn off the Impact Wrench. The Rocker Switch features a forward/reverse mechanism which allows you to change the rotational direction of the Impact Wrench. For a *clockwise* rotation, squeeze the **lower** portion of the Rocker Switch. For a *counterclockwise* rotation, squeeze the **upper** portion of the Rocker Switch. To avoid damage to the Impact Wrench, always wait until the tool completely stops before changing rotational directions. **(See Figure D.)**
3. **3/4” Impact Head (10):** The 3/4” Impact Head features a spring and ball clip to securely hold a socket. The Impact Head accepts all sizes of standard and metric sockets having a 3/4” drive. **(See Figure D.)**




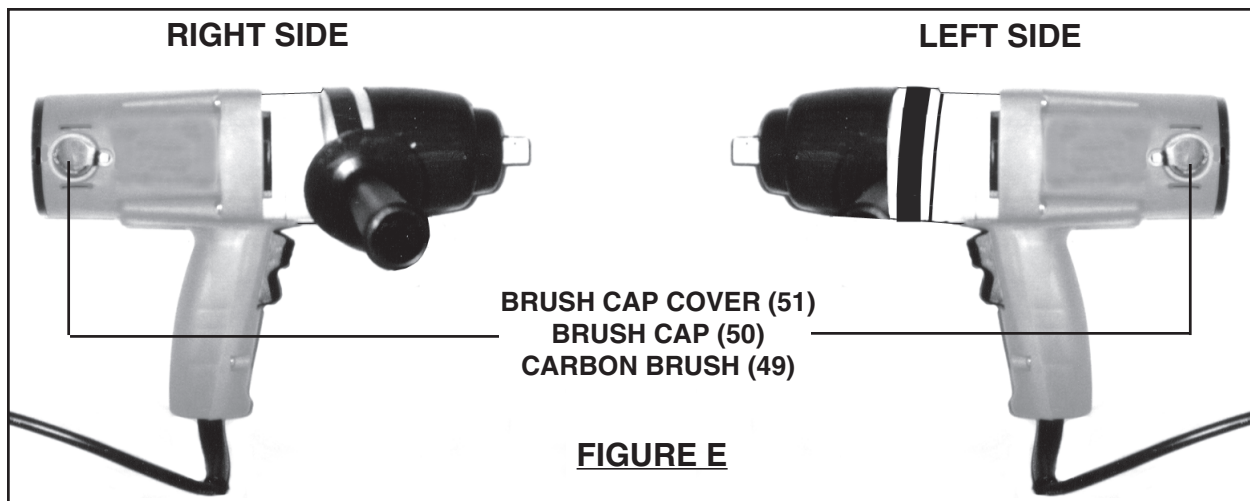
OPERATING INSTRUCTIONS

1. Before installing a socket (not included), turn off the Impact Wrench and unplug the tool from its electrical outlet before changing accessories. Then, firmly insert a 3/4" drive socket (not included) onto the 3/4" Impact Head (10) of the tool. Note: Only use impact sockets with this tool. **(See Figure D.)**
2. Whenever possible, secure the workpiece in place, using a vise or clamps (not included).
3. Insert the socket onto the nut that is to be loosened/tightened.
4. Plug the Power Cord (46) of the Impact Wrench into the nearest 120 volt, grounded, electrical outlet. **(See Figure D.)**
5. Make sure to hold the Impact Wrench firmly with **both** hands, as torque from the Motor will cause the tool to twist. Then squeeze the *upper* portion of the Rocker Switch (39) to *loosen* the nut, or squeeze the *lower* portion of the Rocker Switch to *tighten* the nut. **(See Figure D.)**
6. When finished, release the Rocker Switch (39) to stop the Impact Wrench. Then, unplug the Power Cord (46) from its electrical outlet. **(See Figure D.)**
7. Make sure to store the Impact Wrench in its Carrying Case (57) and in a dry, clean, location out of reach of children and other unauthorized people.

INSPECTION, MAINTENANCE, AND CLEANING

1.  **WARNING!** Always make sure the Rocker Switch (39) is in its "OFF" position, and unplug the Power Cord (46) from its 120 volt electrical outlet before performing any inspection, adjustments, maintenance, or cleaning.
2. **Before each use:** Inspect the general condition of the Impact Wrench. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use. **Do not use damaged equipment.**
3. **Daily:** Use a clean cloth and mild detergent to remove all dirt and debris from the Impact Wrench. Do not use solvents. Do not immerse the Impact Wrench in any liquid.

4. **To replace the Motor Carbon Brushes:** It may become necessary at sometime to replace the *two* Carbon Brushes (49) when the Motor performance decreases, or stops working completely. **The Carbon Brushes are located on each side of the Field Case (31).** To do so, remove the two Brush Cap Covers (51). Next, remove the two Brush Caps (50). Then, remove the two Carbon Brushes (49). If the Carbon Brushes are worn down more than 1/2, replace *both* Carbon Brushes. If, however, the Carbon Brushes are just dirty they may be cleaned by rubbing them with a pencil eraser. When installing the Carbon Brushes, make sure the carbon portion of the Carbon Brushes contact the Motor Armature, and that the springs face away from the Motor. Also, make sure the springs operate freely. After cleaning or replacement, replace the Brush Caps (50) and Brush Cap Covers (51). **NOTE: New Carbon Brushes tend to arc or spark when first used until they wear and conform to the Motor's Armature.** (See Figure E.)
5.  **WARNING!** All maintenance, service, and repairs not listed in this manual are only to be attempted by a qualified technician.



PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

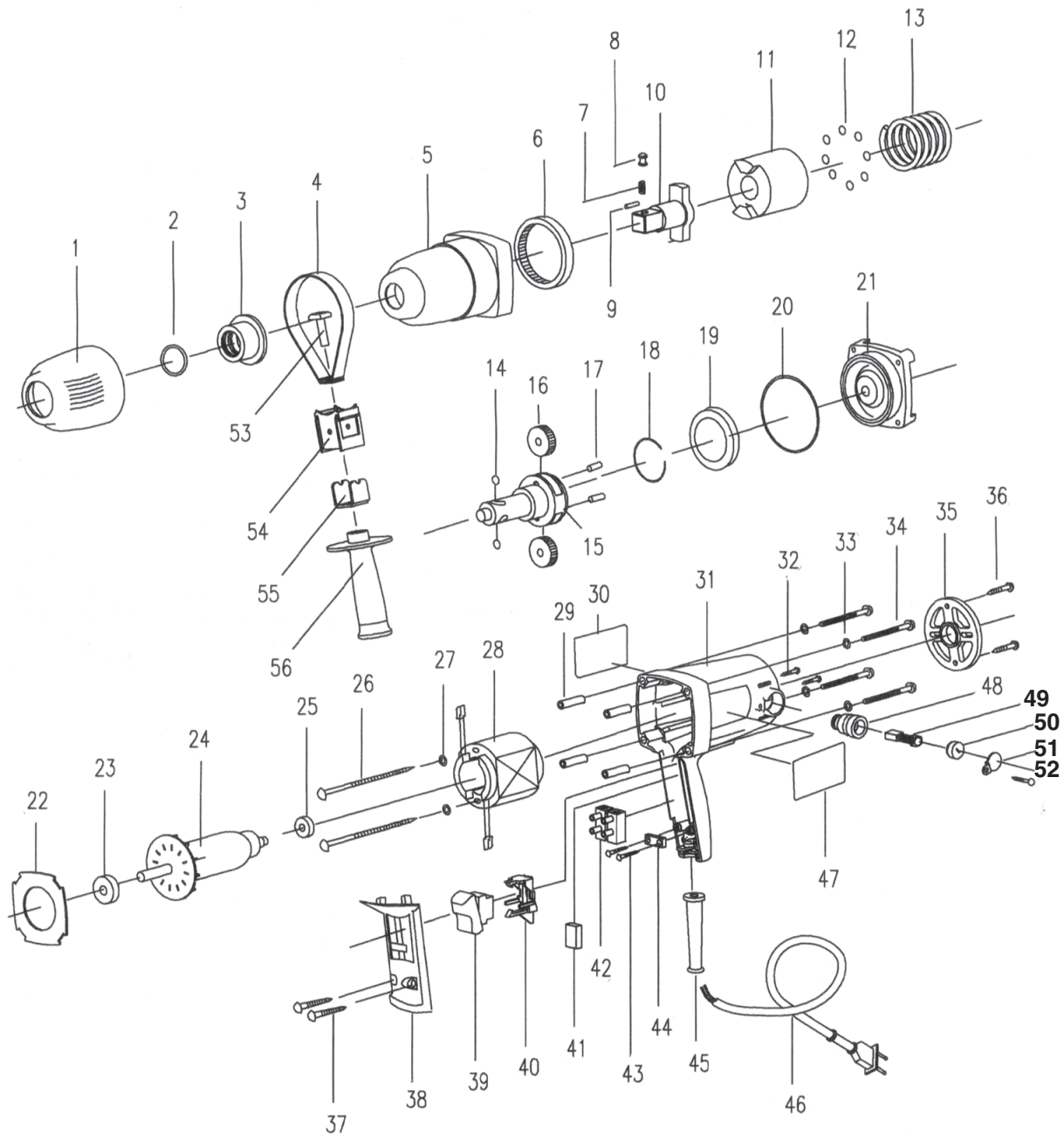
PARTS LIST

Part #	Description	Qty.	Part #	Description	Qty.
1	Protection Cover	1	29	Lining	4
2	O-Ring	1	30	Label	1
3	Bearing	1	31	Field Case	1
4	Band	1	32	Screw (M5 x 8)	2
5	Gear Box	1	33	Washer (M5)	4
6	Inner Gear	1	34	Hex Bolt (M5 x 60)	4
7	Compression Spring	1	35	End Cap	1
8	Pin (2 x 10)	1	36	Screw (ST4.2 x 16-F-H)	2
9	Spring Pin	1	37	Screw (ST4.2 x 19-F-H)	2
10	Impact Head	1	38	Handle Cover	1
11	Impactor	1	39	Rocker Switch	1
12	Steel Ball (5/32")	22	40	Switch Holder	1
13	Spring	1	41	Capacitor	1
14	Steel Ball (9/32")	2	42	Terminal Post	1
15	Spindle	1	43	Screw (ST4.2 x 16-F-H)	2
16	Gear	2	44	Cord Clamp	1
17	Pin	2	45	Cord Sheath	1
18	Washer	1	46	Power Cord	1
19	Bearing (61910-2Z)	1	47	Name Plate	1
20	O-Rubber Sealing Ring	1	48	Brush Holder	2
21	Inner Cover	1	49	Carbon Brush	2
22	Fan Baffle	1	50	Brush Cap	2
23	Bearing (6200-2RS)	1	51	Brush Cap Cover	2
24	Armature	1	52	Screw (ST4.2 x 9.5-F-H)	2
25	Bearing (608-2Z)	1	53	Four Corners Bolt	1
26	Screw (5 x 70)	2	54	Handle Holder	1
27	Washer (M5)	2	55	Rod Holder	1
28	Field	1	56	Side Handle	1

NOTE:

Some parts are listed and shown for illustration purposes only,
and are not available individually as replacement parts.

ASSEMBLY DIAGRAM



NOTE:

Some parts are listed and shown for illustration purposes only,
and are not available individually as replacement parts.